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Special Fund for Abatement of Combined Sewer Overflow Pollution in Marine Bays and Estuaries (The Marine CSO Fund), Guidance for the Preparation and Review of Applications

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Guidance for the Preparation and Review of Applications

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This guidance describes the special fund for abatement of combined sewer overflow pollution in marine bays and estuaries. It provides the applicant, State and Environmental Protection Agency (EPA) personnel with a description of: the contents of a complete application, the procedure for State and EPA review and evaluation of an application, the evaluation and priority criteria, and technical guidance for the preparation of a application.

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I. PURPOSE

This guidance describes the special fund for abatement of combined sewer overflow pollution in marine bays and estuaries. It provides the applicant, State and Environmental Protection Agency (EPA) personnel with a description of: the contents of a complete application, the procedure for State and EPA review and evaluation of an application, the evaluation and priority criteria, and technical guidance for the preparation of an application.

II. DISCUSSION

A. Statutory Basis and Legislative History

1. Section 201(n)(2) of the Federal Water Pollution Control Act, enacted as a part of the Municipal Wastewater Treatment Construction Grants Amendments of 1981, authorizes a special fund for abatement of combined sewer overflow pollution in marine bays and estuaries (The Marine CSO Fund). Section 201(n)(2) states in part that:

   ...the Administrator shall have available...funds...to address water quality problems of marine bays and estuaries subject to lower levels of water quality due to the impacts of discharges from combined storm water and sanitary sewer overflows from adjacent urban complexes...

2. The HUD - Independent Agency Appropriations Acts for fiscal years 1983 and 1984 provided $30 million each (for a total of $60 million) to fund projects under Section 201(n)(2).

3. The 1984 Appropriations Act (P.L. 98-45) appropriates $30 million "...for projects under section 201(n)(2), subject to the approval of the Committees on Appropriations..." The Conference Report to the 1984 Appropriations Act (Conf. Rpt. 98-264, p.11) states that the committees "... will consider only ... project segments which can be fully funded and which will provide significant near-term water quality and public health improvements."

B. Regulatory Requirements

1. Applicable Requirements of the Construction Grants Program

Potential marine CSO projects must satisfy most of the same requirements as CSO projects funded under the final construction grants program regulation (Title 40 of the Code of Federal Regulations (CFR), 35.2000 et seq.).

These requirements include all applicable limitations on award and grant conditions, as well as Federal share and allowable cost provisions; but exclude §§35.2010 (Allotment; reallotment), 35.2015 (State priority system), 35.2020 (Reserves), 35.2021 (Reallotment of reserves), 35.2025(b) (Advance of allowance), 35.2042 (Review of grant applications), 35.2103 (Priority determination), 35.2109 (Step 2+3), and 35.2202 (Step 2+3 projects). A discussion of application procedures and criteria for setting priorities for marine CSO projects is provided below.

Guidance on the construction grants program is provided in an EPA publication series "Construction Grants." This guidance is being updated and will be republished as "Construction Grants 1984." The current guidance, "Construction Grants 1982," is available from the National Technical Information Service, 5258 Port Royal Road, Springfield, VA. 22161 (ordering number PB 82 263666).

2. Application Contents

Section 35.2040(f), 35.2040(b) and 35.2024(b)(1) of the construction grants regulation describe the contents of an application for Step 3 grant assistance for building a treatment works to address marine CSOs. The regulation requires an application (EPA Form 5700-32) accompanied by:

(a) A facilities plan, including environmental documents, prepared in accordance with 35.900 et seq. or 35.2000 et seq. as appropriate;
(b) Certification from the State that there has been adequate public participation based on State and local statutes;
(c) Evidence of compliance with all applicable limitations on award (§§ 35.2100 through 35.2127, except 35.2103 and 35.2109). Certain requirements are discussed further in sections 3 and 4 below;
(d) Final design drawings and specifications; or a commitment to provide them by a date set by the Regional Administrator;
(e) The project schedule;
(f) In the case of an application for Step 3 assistance that is solely for the acquisition of eligible real property, a plat which shows the legal description of the property to be acquired, a preliminary layout of the distribution and drainage systems, and an explanation of the intended method of acquiring the real property (see 40 CFR Part 4); and
(g) A demonstration by the State of the water quality benefits of the proposed project. The demonstration shall at a minimum prove that significant usage of the water for shellfishing and swimming will not be possible without the proposed project for correction of combined sewer overflows, and that the proposed project will result in substantial restoration of an existing impaired use. Section IV of this guidance presents ways to demonstrate benefits and costs.

3. Costs and Financial Capability

(a) The applicant should give particular attention to the limitation on award found in Section 35.2104(b). This section requires that the applicant demonstrate the legal, institutional, managerial, and financial capability to

ensure adequate building and operation and maintenance of the treatment works. This demonstration must include an explanation of the roles and responsibilities of the local governments involved and how construction and operation of the facilities will be financed; a current estimate of the cost of the facilities; and a calculation of the annual costs per household. It must also include a written certification, signed by the applicant, that the applicant has analyzed the costs and financial impacts of the proposed facilities. Where the application is for a phase or segment (see section 4), this information must be for the treatment works of which the phase or segment is a part.

Detailed guidance on the demonstration of financial capability is provided in the Agency's Financial Capability Policy effective upon publication in the Federal Register and the supporting "Financial Capability Guidebook". The guidebook is available from the State water pollution control agency or the National Technical Information Service, 5258 Port Royal Road, Springfield, VA 22161.

4. Phased or Segmented Treatment Works

If the application is for a project that is a phase or segment of the proposed treatment works described in the facilities plan, the description of benefits and costs should be for the treatment works and the segment applied for as described in the facilities plan because the criteria applied by EPA in setting priority (section 6 below) will be applied to the entire facility plan proposal and each segment proposed for funding.

The conditions that any project must meet to be funded as a phase or segment are described in Sections 35.2108 and 35.2005(b)(49). Of particular importance is the requirement that the applicant agree to make the treatment works of which the phase or segment is a part operational and comply with the enforceable requirements of the Act regardless of whether grant funding is available for the remaining phases or segments.

Section 35.2108 also requires that the grant agreement for a phased or segmented treatment works include a schedule of actions to make the treatment works operational and comply with the enforceable requirements of the Act.

5. "Marine Bay or Estuary"

For the purpose of this fund "marine bay or estuary" is defined in Section 35.2005(b)(26) as "semi-enclosed coastal waters which have a free connection to the territoral sea."

6. Project Evaluation Process

All eligible applications will be evaluated and priorities established by Headquarters using the criteria specified in Sections 35.2024(b)(2)&(3) of the construction grants regulation. These sections specify that the Administrator shall establish priorities for projects with demonstrated water quality benefits based upon the following criteria:

(1) Extent of water use benefits that would result, including swimming and shellfishing;
(2) Relationship of water quality improvements to project costs; and
(3) National and regional significance.

If the application is for a project that is a phase or segment of the proposed treatment works described in the facilities plan, these criteria will be applied to the treatment works described in the facilities plan and each segment proposed for funding. In applying criterion (1), EPA will consider the total benefits resulting from project or segment completion relative to the prospective commitment of Federal funds.

III. PROCEDURAL GUIDANCE

A. The general regulations that pertain to processing applications for EPA Grants are found in 40 CFR Part 30. The applicant may obtain application materials from the State agency designated by the Governor as having the responsibility for administration of the construction grants program under Section 205(b) of the Clean Water Act. The applicant should send the completed application to the State agency.

B. The State agency should (1) review and approve: (a) the application, (b) the facilities plan, and (c) the project design; (2) determine compliance with other State and Federal requirements; (3) prepare the water quality demonstration described in section II B 2 above; and (4) send the approved application, and water quality demonstration, to the Regional Administrator.

C. The Regional Administrator shall (1) determine whether all Federal requirements have been met, including completion of environmental review, (2) prepare a statement of regional and national significance, and (3) determine eligibility of the project for consideration for funding.

The Region will send the facility plan including environmental documents, the water quality demonstration, statement of regional and national significance, and summaries of any other relevant material available to support the technical review of the application to the Office of the Director; Facility Requirements Division (WH-595), 401 M Street, SW, Washington, D.C., 20460. The Region should retain the balance of the application unless otherwise advised by Headquarters.

D. The information described above should be received in the Office of the Director within 120 days of the publication of the final construction grants regulation (40 CFR, Part 35, Subpart I) in the Federal Register to ensure consideration for funding from the fiscal year 1983 and 1984 appropriations. If funds are appropriated for future fiscal years, applications should be received by September 30 (the end of the fiscal year) to ensure consideration under that year's appropriation.

Generally within 30 days of receipt of an application, EPA headquarters will advise the applicant whether additional information is required. Additional information should be submitted through the above procedures and should be received within 180 days of the publication of the final construction grants regulation in the Federal/Register (or November 30 of future years as appropriate) to ensure consideration. Early submittal of applications is strongly encouraged.

The Region should schedule the submission of State approved final design drawings and specifications to allow sufficient time for Regional review, approval, and notification of the Office of the Director within 210 days of the final construction grants regulation in the Federal/Register (or January 31 of future years as appropriate).

E. All eligible applications will be evaluated and priorities established by Headquarters using the criteria specified in section II.B.6. Headquarters will prepare project summaries and funding recommendations for transmittal by the Administrator to the House and Senate Appropriations Committees for review in accordance with Public Law 98-45 (the fiscal year 1984 Appropriations Act) and the associated Conference Committee Report. After completion of this process and final project approval, Headquarters will provide obligating authority to the appropriate Regional Administrators.

F. Generally 45 days after receipt of obligating authority, the Regional office will prepare the grant agreement and transmit it to the applicant for execution. The Region, or State, to the extent it is delegated responsibility to administer the marine CSO program, will monitor the grant and project completion.

IV. TECHNICAL GUIDANCE

A. Water Quality Demonstration

Section 35.2024(b)(1) requires the State to demonstrate the water quality benefits of the proposed project. The demonstration shall at a minimum prove that:

1. Significant usage of the water for shellfishing and swimming will not be possible without the proposed project for correction of combined sewer overflows; and

2. The proposed project will result in substantial restoration of an existing impaired use.

The first requirement involves a demonstration that the proposed project is essential for significant usage of the water for shellfishing and swimming. Other point and nonpoint source controls may also be necessary in addition to the proposed project. The second requirement is a demonstration that the project alone will result in a substantial restoration of use.

The purpose of the first requirement is to consider the marine CSO within a context of the overall water quality conditions. Swimming and shellfishing use potentials should be assessed in terms of all significant point and nonpoint sources. The grant application should compare the severity and extent of water quality problems which can be attributed to the different pollution sources. The analysis of these different point and nonpoint source related water quality problems may have been conducted as part of Statewide or areawide planning under Section 208, State Basin Plans, or other special studies.

To assess whether significant usage for swimming and shellfishing would result without the proposed project, the grant application should present an analysis of expected future water quality conditions with and without additional CSO controls. The alternative of no additional CSO control should assume that all current requirements for point source treatment are satisfied, and all proposed nonpoint source controls, as identified in the adopted water quality management plan, are operational. Projected water quality conditions with no CSO controls should be compared to those likely to result from the proposed project.

The application should discuss nonpoint source problems including urban runoff and their effect on shellfishing and swimming. Where nonpoint source controls are identified, the application should discuss their status, and plans for implementation, if any.

The grant application should identify Federal, State and local health requirements governing swimming and shellfishing. These requirements will have a bearing on whether improved water quality will actually result in improved uses. The applicant should coordinate with responsible health or

recreation authorities and indicate their willingness to lift swimming and shellfishing prohibitions as a result of improved water quality due to the proposed project when implemented with other necessary point and nonpoint controls. The application may also discuss the extent to which use impairment is likely to be prevented by the project.

The second requirement concerns a demonstration that the project alone will result in substantial restoration of an existing impaired use. This demonstration is likely to involve an analysis relating the combined sewer overflows and the resulting water quality. The demonstration is not limited solely to shellfishing and swimming and includes additional uses such as boating and fishing as well as aesthetics. The analysis should show how the proposed project alone will substantially restore prior or currently impaired water uses. The analysis may also discuss the prevention of future use impairment.

The demonstrations for these two requirements will involve a cause and effect analysis relating pollution loads to resulting water quality. Mathematical models are often used for this purpose, however, they are not necessary in all circumstances. Different levels of sophistication may be justified depending on the complexity of the receiving water and combined sewer collection system. Relatively complex situations may require models to make reasonable and justified predictions of future water quality conditions for different CSO control alternatives.

For less complex situations, a relationship between CSO's and beneficial uses could be established from field data and professional judgement. This may occur where the overflows are in the immediate vicinity of swimming and shellfishing areas and where receiving water flow and transport patterns clearly show the impact of CSO's on these areas. The cause and effect relationship should be demonstrated with an analysis of field data showing bacteria levels and standards violations as an empirical function of overflows.

It is of primary importance for an applicant to demonstrate a strong relationship between the CSO's and resulting beneficial use impairment. The Headquarter's review will consider the strength of this technical demonstration. Some situations, therefore, may justify more sophisticated techniques and more data than others in order to minimize uncertainty in the loading functions. In such a situation, projects that base benefits on receiving water models may receive higher ranking than those which claim greater benefits based on arbitrary assumptions or unverified analyses.

B. Assessment of Swimming and Shellfishing Benefits

Benefits resulting from proposed marine CSO facilities may be expressed in terms of use factors such as the expected change in the number of days beaches or shellfish beds are open or closed. Determination of an absolute benefit in terms of a single monetary figure is not required and projects will not be ranked by benefit-cost ratios. However, studies which monetize benefits will be reviewed and could provide valuable background and supporting information.

Although it is not necessary to quantify benefits into a single number, grant applications should discuss the value and significance of improved uses. For example, the application could cite the following for the area affected by the CSO:

- Assessment of current water quality conditions
- Requirements of a NPDES permit, EPA administrative order, or a consent decree
- Recreational surveys, studies, or plans
- Historical water uses and existing recreational facilities
- Areal extent of commercial or recreational shellfishing and estimated yields including State requirements affecting allowable yields
- Uniqueness and availability of alternative swimming and shellfishing sites
- Physical characteristics affecting use such as water temperature, bottom characteristics, current, tides, salinity, etc.
- Chemical characteristics affecting shellfishing; for example, potential problems from heavy metals or other pollutants
- Population adjacent to the site, potential for use, transportation and access to the site, boat access, etc.
- Potential benefits for existing and future water supplies
- Other specific attributes of the area affected by the CSO which will influence use.

C. Comparison of Benefits and Costs

To evaluate different CSO control alternatives, the costs and relative benefits should be compared to the baseline alternative of no additional CSO control. Benefits may be expressed in terms of use factors such as number of days beaches are closed, as previously discussed. Costs and benefits for different alternatives may be plotted and displayed graphically to help determine a cost-effective range where marginal costs are not large compared to incremental benefits. Systematic evaluation of alternatives may have been undertaken as part of previous planning efforts and is required for facilities planning under section 35.2030. The application should list the structural and non-structural CSO control alternatives considered. Documentation of this analysis will help in the review and evaluation of the grant application.

Applications should display the following costs along with the benefits discussed above for each proposed alternative including all phases or segments of the treatment works of which the proposed project is a part:

- Capital cost
- Yearly operation and maintenance cost
- Average annual equivalent cost for the project alone
- Annual household charges for the project alone and total including existing system charges.

D. Statement of Regional and National Significance

The statement of regional and national significance prepared by the Regional Administrator should be broad in scope and not necessarily limited to swimming and shellfishing. Discussions should focus on the area of immediate CSO impact but may also address the receiving water as it relates to larger ecosystems of which it is a part. For example, the following subjects should be discussed as appropriate:

- Additional shellfishing yields resulting from the project and relation to regional and national production
- Additional swimming opportunities related to other opportunities in the region
- Effect on marine life other than shellfish
- Enhancement of wetlands or habitats of threatened, rare, or endangered species
- Historical significance of the area and proximity to historical and archeological sites
- Enhancement of the aesthetic quality of the waters
- Proximity to parks and recreation areas
- Significance of additional recreational benefits provided by the project such as boating and fishing
- Location of waters with special national, State, or local resource designation
- Other unique features of the area and their relationship to the project

Statements on national and regional significance should relate the measures of project benefit to comparable measures (qualitative or quantitive) presented in reports on the region or nation as appropriate, for example:

- State Comprehensive Outdoor Recreation Plans
- National surveys of outdoor recreation activities (published periodically by the U.S. Department of Interior)
- State shellfish harvest, production, or closure reports
- National reports of shellfish production (published periodically by the U.S. Department of Interior).